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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert J Briscoe

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EXAMINER

GHOWRWAL, OMAR J

ART UNIT

PAPER NUMBER

2463

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,442	<b>Applicant(s)</b> BRISCOE ET AL.	
	<b>Examiner</b> OMAR GHOWRWAL	<b>Art Unit</b> 2463	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/09/09.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Remarks***

1. This Office action is considered fully responsive to the amendment filed 11/09/09.
2. The objections to the drawings have been withdrawn because they have been amended accordingly.
3. The Examiner thanks Applicant for bringing the co-pending application to the Examiner's attention. However, as a reminder, Applicant has the duty to disclose for the filing of >a< application (37 CFR 1.56) which is not limited to just the dealing with the Examiner (MPEP 2001.03). Also, in view of MPEP 2001.06(b) Applicant has the burden of presenting the Examiner with a complete and accurate record to support the allowance of letters patent.

### ***Response to Arguments***

4. Applicant's arguments filed 11/09/09 have been fully considered but they are not persuasive. Arguments pertaining to limitations of the independent claims are clarified in the rejection below. Regarding dependent claims 7 and 14, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 4, 6, 8, 11, 13** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Publication No. 2003/0202469 A1 to *Cain*.

As to claim 1, *Cain* discloses an intermediate node (fig. 1, node 3) for controlling the treatment of data traversing a path (para. 0031-0033, 1-3-5-4 being a path) across a data network from a provider node to a receiver node (fig. 1, node 1 is provider, nodes 4, 5 receivers), the data network comprising said intermediate node, at least one upstream node (fig. 1, node 1), and a plurality of downstream nodes (fig. 1, nodes 5, 4), the or one of the upstream nodes being arranged to provide data to said intermediate node via a portion of the path between the provider node and the intermediate node (para. 0031-0033, portion of path can be 1-3), the or one of the upstream nodes being arranged to provide path characterization information to said intermediate node via a portion of the path between the provider node and the intermediate node, said path characterization information being dependent on information fed back from the receiver node to the provider node (para. 0034-0035, fig. 1, an QoS established path may break at the receiver node, which sends the provider node an error notification, causing the provider node to start the QoS RREQQ process described in paras. 0031-0033), and said downstream nodes being arranged to receive data via respective portions of paths between the intermediate node and the receiver node (para. 0031-0033, QoS parameter link metric sent from node 1 and traverses path 1-3-5-4, nodes 5 and 4 being

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downstream from node 3, 3-5 being a portion, and 3-5-4 being a portion); said intermediate node comprising:

means for receiving data from an upstream node (para. 0031-0033, node 3 receives data from node 1);

means for receiving path characterization information from an upstream node, and for deriving therefrom information indicative of a characteristic of a portion of the path between the intermediate node and the receiver node (para. 0031-0033, node 3 updates QoS link metric that pertains to sending data to destination node 4 (downstream or node 3), and then sends QoS route request to other nodes 2 and 5 (which are downstream)—furthermore, node 3 reserves resources based upon the path characterization information, hence the resource information was derived from the characterization information, and this resource information is indicative of "a portion" of the path between node 3 and 4, as node 3 itself is "a portion" of this path);

means arranged to select, in dependence on said information indicative of said characteristic, a preferred manner of treatment for data to be forwarded (para. 0031-0033, because data must travel to node 4, the QoS route request is forwarded to other downstream nodes of the current intermediate node so that it can eventually reach node 4 (which is a manner of treatment)); and

means for forwarding data to a downstream node according to said preferred manner (para. 0031-0033, forwarding data through paths 1-3-5-4).

As to claim 4, *Cain* further discloses an intermediate node according to claim 1, wherein the data provided to said intermediate node comprises said path

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characterization information (para. 0031-0033, QoS request is made up of a link metric pertaining to bandwidth, error rate, end-to-end delay, etc. which pertain to the path).

As to claim 6, *Cain* further discloses an intermediate node according to claim 1, wherein the intermediate node shares computational resources with an upstream or a downstream node (para. 0031-0033, QoS request is made up of a link metric pertaining to bandwidth, error rate, end-to-end delay, etc. which pertain to the path, and these are computational resources pertaining to the path, and they are updated as the link metric traverses the system).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 2-3, 7, 9-10, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0202469 A1 to *Cain* in view of U.S. Publication No. 2004/0146007 A1 to *Saadawi et al.* ("*Saadawi*").

As to claim 2, *Cain* does not expressly disclose an intermediate node according to claim 1, wherein the selection of a preferred manner of treatment for data to be forwarded on a downstream path relates to selection of a preferred downstream path.

*Saadawi* discloses a FCP generated by a source node travels towards a destination node through intermediate nodes, and once the FCP arrives at an intermediate node, the stored weights of the intermediate node's neighbors are used in

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selecting the next node to send the FCP to (para. 0054), i.e. this is the preferred path based upon weighting.

*Cain* and *Saadawi* are analogous art because they are from the same field of endeavor regarding routing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the weighted selection as taught by *Saadawi* into the invention of *Cain*. The suggestion/motivation would have been to aid in determining the next node to send an FCP to (*Saadawi*, para. 0054).

As to claim 3, *Cain* does not expressly disclose an intermediate node according to claim 1, wherein the selection of a preferred manner of treatment for data to be forwarded relates to selection of one or more of the following: (i) traffic engineering; (ii) route advert verification; (iii) contract verification; (iv) differentiated service gateways.

*Saadawi* discloses a FCP generated by a source node travels towards a destination node through intermediate nodes, and once the FCP arrives at an intermediate node, the stored weights of the intermediate node's neighbors are used in selecting the next node to send the FCP to (para. 0054), i.e. this is the preferred path based upon weighting. Furthermore, the weights are used in conjunction with a probability routing table (para. 0054, 0050), i.e. this is a form of traffic engineering as a flow of traffic is constructed based upon weight parameters.

*Cain* and *Saadawi* are analogous art because they are from the same field of endeavor regarding routing.

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At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the weighted selection as taught by Saadawi into the invention of Cain. The suggestion/motivation would have been to aid in determining the next node to send an FCP to (Saadawi, para. 0054).

As to claim 7, *Cain* does not expressly disclose an intermediate node according to claim 1, wherein the means arranged to select a preferred manner of treatment for data to be forwarded comprises means for selecting one of said downstream nodes as a preferred downstream node; and wherein the means for forwarding data according to said preferred manner comprises means for forwarding data to said preferred node.

*Saadawi* discloses a FCP generated by a source node travels towards a destination node through intermediate nodes, and once the FCP arrives at an intermediate node, the stored weights of the intermediate node's neighbors are used in selecting the next node to send the FCP to (para. 0054), i.e. this is the preferred path based upon weighting. Furthermore, the weights are used in conjunction with a probability routing table (para. 0054, 0050), i.e. this is a form of traffic engineering as a flow of traffic is constructed based upon weight parameters.

*Cain* and *Saadawi* are analogous art because they are from the same field of endeavor regarding routing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the weighted selection as taught by Saadawi into the invention



of Cain. The suggestion/motivation would have been to aid in determining the next node to send an FCP to (Saadawi, para. 0054).

As to claim 9, see similar rejection for claim 2. The node teaches the method.

As to claim 10, see similar rejection for claim 3. The node teaches the method.

As to claim 14, see similar rejection for claim 7. The node teaches the method.

9. **Claims 5, 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0202469 A1 to *Cain* in view of U.S. Publication No. 2001/0055290 A1 to *Seidel et al.* ("*Seidel*").

As to claim 5, *Cain* does not expressly disclose an intermediate node according to claim 1, the data network comprising a data channel for the forwarding of data between nodes and a control channel for providing path characterization information to the intermediate node, wherein the upstream node arranged to provide data to said intermediate node is a node of the data channel, and the upstream node arranged to provide path characterization information to said intermediate node is a node of the control channel.

*Seidel* discloses a data channel transmits protocol data units (PDUs), and a control channel which is independent of the data channel transmits sequence numbers (SNs), and both of these channels operate using a QoS level (para. 0019-0022), i.e. data is sent across the data channel, and SNs, which characterize the path by providing information about data units that must be sequentially received via the path (in other words, there are 'x' amounts of PDUs and this is the order they must be received in over

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the path), are transmitted across the control channel. Additionally, the SNs of the control channel identify whether incremental redundancy is used or not, and this reconfigures the receiver to an on/off state for incremental redundancy (para. 0050), i.e. this is more path characterization information, as the receiver in the path can change states based upon the SNs.

*Cain* and *Seidel* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the data and control channels as taught by *Seidel* into the invention of *Cain*. The suggestion/motivation would have been to provide for additional performance gain (*Seidel*, para. 0019).

As to claim 12, see similar rejection for claim 5. The node teaches the method.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR GHOWRWAL whose telephone number is (571)270-5691. The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. G./

Examiner, Art Unit 2463

/Derrick W Ferris/

Supervisory Patent Examiner, Art Unit 2463